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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/657,624

09/08/2003

Christopher Vitello

200207120-1

1542

22879 7590 01/16/2007

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EXAMINER

NGUYEN, TAI V

ART UNIT

PAPER NUMBER

3729

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/16/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/657,624

Applicant(s)

VITELLO ET AL.

Examiner

Tai Van Nguyen

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 11-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)            |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application. |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                           |

## **DETAILED ACTION**

### ***Response to Amendment***

1. In regards to the merits Seemann III (US 5,958,325) in view of Lim (US 4,690,682) in the previous Non Final Rejection filed 10/23/2006, the applicants' arguments that there is no suggestion or motivation for modified Seemann III by dissolving at least a portion of the channel core have been found to be persuasive.

Accordingly, the previous Non Final Rejection has been withdrawn.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3-5 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Silverbrook (US 6,247,792).

As applied to claims 1 and 3, McKenna et al disclose a method of creating an internal channel of a fluid-ejection device, the method comprising: encapsulating a channel core (55, 56) in an element (18, 20) of the fluid-ejection device that corresponds to the internal channel (see sequence of Fig. 14, 15).

As applied to claim 4, Silverbrook discloses the composite channel core comprises a soluble material (18) and insoluble particles (19, 20) dispersed within the soluble material.

As applied to claim 5, Silverbrook discloses wherein encapsulating a channel core in an element of the fluid-ejection device comprises molding material (28, 29) of the element around the channel core.

As applied to claim 7, Silverbrook discloses encapsulating a channel core in an element of the fluid-ejection device comprises: forming the channel core in a groove of a component of the element of the fluid-ejection device (see Sequence Fig. 14 and 15); and disposing a material (18, 20) of the element of the fluid-ejection device on the component so as to cover the channel core.

#### Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 6, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook in view of Yamamoto (US 5,694,684).

As applied to claim 6 and 8, Silverbrook discloses all of the limitations of the claimed invention except that the step disposing the channel core within a mold cavity; and injecting a material of the element into the mold cavity.

However, Yamamoto teaches the step disposing the channel core (72, Fig. 4) within a mold cavity (64); and injecting a material of the element into the mold cavity (column 6, lines 39-45).

It would have been obvious to one of ordinary skill in the art at this time the invention was made to have modified the method of Silverbrook by including mold cavity, as taught by Yamamoto, to positively ink jet recording heads with high resolution (column 2, lines 55-58).

6. Claims 2 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto.

Regarding to claims 2 and 9, it would have been obvious matter engineering design to choose any desired water-soluble channel core and water-soluble polymer, since applicants have not that the claimed water-soluble, solve any problem or is for any particular purpose and it appear that the invention would perform well with water-soluble of the applied art above.

#### ***Allowable Subject Matter***

7. Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***


8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tai Van Nguyen whose telephone number is 571-272-4567. The examiner can normally be reached on M-F (7:30 A.M - 4:30 P.M).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TN. December 19, 2006



**A. DEXTER TUGBANG**  
**PRIMARY EXAMINER**